

Claims:

1. A reinforcing net for use in making a product, said reinforcing net comprising, at least two separated, substantially parallel continuous longitudinally extending spreader yarns, said spreader yarns defining a longitudinally extending plane; a plurality of continuous weft yarns extending at an angle to said spreader yarns and extending across one side of said plane around one of said spreader yarns and across said plane on the other side of said plane to the other spreader yarn and around said other spreader yarn; and an adhesive.
- 10 2. A reinforcing net as claimed in claim 1 wherein said plurality of weft yarns cross said spreader yarns to form a plurality of first intersections and said adhesive is located at a plurality of said first intersections to bond said weft yarns to said spreader yarns.
- 15 3. A reinforcing net as claimed in claim 1 wherein said plurality of weft yarns cross to form a plurality of second intersections and said adhesive is located at a plurality of said second intersections to bond said weft yarns.
4. A reinforcing net as claimed in claim 2 wherein said plurality of weft yarns cross to form a plurality of second intersections and said adhesive bonds said weft yarns at a plurality of said second intersections.
- 20 5. A reinforcing net as claimed in claim 2 wherein said reinforcing net includes at least one warp yarn.
6. A reinforcing net as claimed in claim 5 wherein said reinforcing net includes a plurality of warp yarns and said plurality of warp yarns cross a plurality of said weft yarns to form a plurality of third intersections and said adhesive is located at a plurality of said third intersections.

7. A reinforcing net as claimed in claim 6 wherein said plurality of warp yarns cross a plurality of said weft yarns to form a plurality of third intersections and said adhesive is located at a plurality of said third intersections.
- 5 8. A reinforcing net as claimed in claim 1 wherein said plurality of weft yarns extend at an angle substantially 45° to said spreader yarns.
9. A reinforcing net as claimed in claim 1 wherein said weft yarns extend at an angle of at least 45° to said spreader yarns.
10. The reinforcing net of claim 6 wherein a plurality of said warp yarns are located between said weft yarns.
11. The reinforcing net of claim 6 wherein a plurality of said warp yarns are located adjacent said weft yarns.
12. The reinforcing net of claim 10 wherein a plurality of said warp yarns are located adjacent said weft yarns.
- 15 13. A ribbon for use in helical winding to make a product, the ribbon comprising: at least one substrate having a width and a longitudinal axis; an adhesive on said substrate; and a reinforcing net, in accordance with claim 1 and wherein said reinforcing net is affixed to said substrate.
14. A ribbon as claimed in claim 13 wherein said reinforcing net includes at least one warp yarn.
15. A ribbon as claimed in claim 14 wherein said reinforcing net includes a plurality of warp yarns.
16. A ribbon as claimed in claim 15 wherein said warp yarns are substantially parallel to said spreader yarns.
- 25 17. A ribbon as claimed in claim 13 wherein said plurality of weft yarns extend at an angle substantially 45° to said spreader yarns.

18. A ribbon as claimed in claim 13 wherein said weft yarns extend at an angle of at least 45° to the spreader yarns.
19. A ribbon as claimed in claim 15 wherein a plurality of said warp yarns are located between said weft yarns.
- 5 20. The ribbon as claimed in claim 15 wherein a plurality of said warp yarns are located adjacent said weft yarns.
21. The ribbon of claim 19 wherein a plurality of said warp yarns are located adjacent said weft yarns.
- 10 22. A ribbon as claimed in claim 10 wherein said reinforcing net is affixed to said substrate so that said longitudinal axis of said substrate is in substantially the same direction as said longitudinally extending plane of said spreader yarns.
23. A ribbon as claimed in claim 13 having at least one second substrate.
- 15 24. A ribbon as claimed in claim 23 wherein said reinforcing net is affixed between said first substrate and said second substrate to form a laminate.
25. A laminate as claimed in claim 24 further comprising a reinforcing wire affixed between said first substrate and said second substrate.
26. The laminate as claimed in claim 24 wherein said reinforcing net includes at least one warp yarn.
- 20 27. The laminate as claimed in claim 26 wherein said reinforcing net includes a plurality of warp yarns.
28. The laminate as claimed in claim 27 wherein said warp yarns are substantially parallel to said spreader yarns.
29. The laminate as claimed in claim 24 wherein said plurality of weft yarns 25 extend at an angle substantially 45° to said spreader yarns.

30. The laminate as claimed in claim 24 wherein said weft yarns extend at an angle of at least 45° to the spreader yarns.
31. The laminate as claimed in claim 27 wherein said warp yarns are located between said weft yarns.
- 5 32. The laminate as claimed in claim 27 wherein a plurality of said warp yarns are located adjacent said weft yarns.
33. The laminate as claimed in claim 31 wherein a plurality of said warp yarns are located adjacent said weft yarns.
- 10 34. The laminate as claimed in claim 24 wherein said first substrate is laterally offset from said second substrate.
35. A method of manufacturing a reinforcing net comprising the steps of: creating tension in at least two separated, substantially parallel continuous longitudinally extending spreader yarns, said spreader yarns defining a first longitudinally extending plane; providing a plurality of spools, said spools 15 supplying a weft yarn; causing said spreader yarns to longitudinally advance away from said spool; rotating said spools about said first plane in a second plane substantially perpendicular to said first plane whereby said weft yarns helically wind around said spreader yarns causing said weft yarns to extend at an angle to said spreader yarns and extend across one side of said first plane 20 around one of said spreader yarns and across said plane on the other side to the other spreader yarn and around said other spreader yarn thereby creating a plurality of first intersections between said weft yarns and said spreader yarns and a plurality of second intersections of said weft yarns, and applying an adhesive to a plurality of said first intersection.
- 25 36. The method claimed in claim 35, further comprising providing a plurality of warp yarns, creating tension in said plurality of warp yarns, said warp yarns extending substantially parallel to said spreader yarns and substantially disposed in said first plane and causing said warp yarns to longitudinally

advance at substantially the same velocity as the longitudinal advance of said spreader yarns thereby creating a plurality of third intersections between said weft yarns and said warp yarns.

37. The method claimed in claim 35, comprising providing a plurality of 5 spools supplying a plurality of weft yarns, providing a weft yarn guide, said weft yarn guide comprising a plurality of first openings through which said weft yarns may be passed and a second opening wherein said spreader yarns longitudinally advance through said second opening.

38. The method claimed in claim 37, comprising rotating said weft yarn 10 guide in a third plane substantially parallel to said second plane such that said weft yarn guide and said plurality of spools are rotated at substantially the same rotational velocity.

39. The method claimed in claim 36, wherein said adhesive is applied to a plurality of said first, second and third intersections.

15 40. The method claimed in claim 35, wherein said adhesive is applied to at least said spreader yarns by placing adhesive on at least one substrate and affixing said substrate to at least said spreader yarns.

41. The method claimed in claim 40, wherein a plurality of substrates are provided.

20 42. The method claimed in claim 41, wherein said spreader yarns and said weft yarns are affixed between said first substrate and said second substrate.

43. The method claimed in claim 42, comprising providing a reinforcing wire and affixing said reinforcing wire to at least one of said substrates.

25 44. The method claimed in claim 36 wherein a plurality of said warp yarns are placed between said weft yarns.

45. The method claimed in claim 36 wherein said plurality of said warp yarns are placed adjacent said weft yarns.